Wayne Leema
St. Louis Post Dispa

Earth Science Field Trips

for teachers
students
amateurs
collectors

1958-1959

An Educational Extension Service of the
ILLINOIS STATE GEOLOGICAL SURVEY
URBANA

Printed by Authority of the State of Illinois

FALL CALENDAR

September 13, 1958

FULTON—WHITESIDE AND CARROLL COUNTIES

In the Fulton area we shall see the Silurian dolomite that only a short distance away forms the famous Mississippi Palisades and from which we can collect a variety of fossils.

The history of the Mississippi River in this area is profoundly interesting. We shall learn about the development of the present Mississippi Valley and see its former valleys and the channels it occupied at various times during the Pleistocene Epoch, or "Ice Age." We also shall see such glacial features as benchlike terraces, sand dunes, valley train deposits, lake deposits, and thick loess deposits.

Assemble at Fulton Community High School.

October 4, 1958

MARSHALL—CLARK AND EDGAR COUNTIES

In the Clark County area we shall see "Coal Measures," or Pennsylvanian age rocks, including fossiliferous limestones and shales, and shall learn of the intricate manner in which these rocks were deposited. We shall hear of the early history of oil production in Clark County and how the oil industry is using recently developed secondary recovery methods to produce more oil.

The surficial material is of Pleistocene age. The area is crossed by the Shelbyville moraine, which represents the southernmost advance of the Wisconsin (fourth) stage of glaciation. We shall discuss the history of the Wabash Valley and the part that the glaciers had in its development.

Assemble at Marshall High School.

October 18, 1958

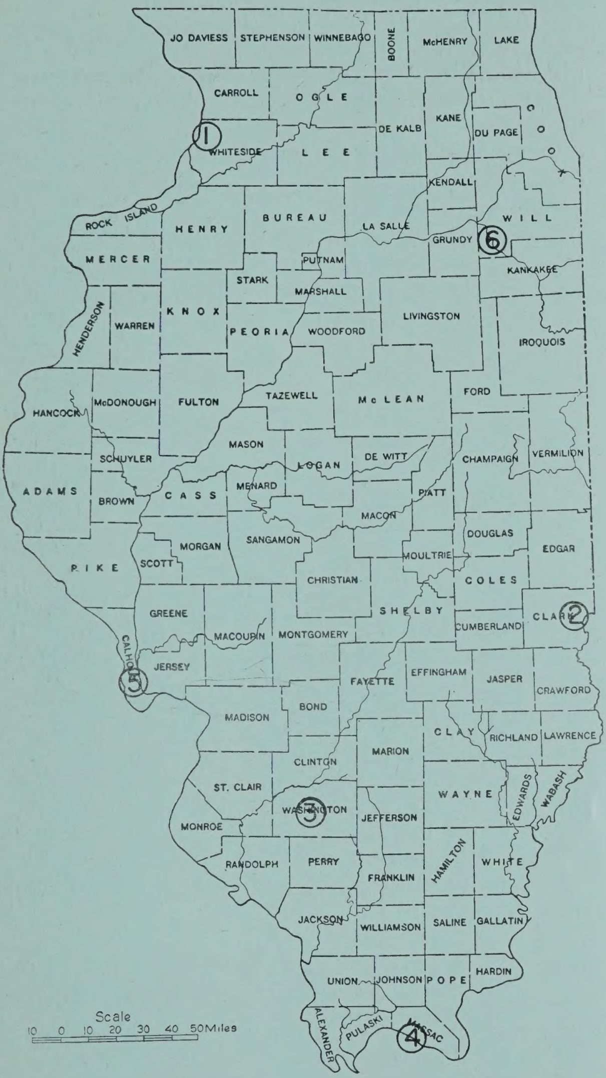
NASHVILLE—WASHINGTON COUNTY

In the Nashville area are several exposures of "Coal Measures," or Pennsylvanian age rocks.

We also shall visit an active limestone quarry, where we can collect fossils representing forms of life that lived during "Coal Measures" time, and an oil field where oil is being produced from rocks much older than those exposed at the surface.

Assemble at the Nashville Community High School.

LOCALITIES



Trips begin at 9 a.m. (Central Standard Time) and end about 4 p.m. Take a packed lunch and your car, or arrange for space at the assembly point.

Bring a hammer and cold chisel for collecting fossils, a knapsack, and paper wrappers to protect the fossils. Wear heavy shoes (low heels for women) and durable clothing.

Anyone interested in geology or collecting rocks and fossils is welcome.

SPRING CALENDAR

April 11, 1959

METROPOLIS—MASSAC AND POPE COUNTIES

Metropolis is situated near the north end of the Mississippi embayment. Here we shall see Cretaceous and Tertiary sediments that were laid down when the present sites of Metropolis and Cairo were near the sea shore.

We shall review the history of the Cache River Valley north of Metropolis, which was the channel of the Ohio River until late in the Pleistocene (12,000 years ago).

Outcrops of Paleozoic rocks in the area are good fossil-collecting sites.

Assemble at the Metropolis Community High School.

May 2, 1959

HARDIN—CALHOUN COUNTY

Geologically, Calhoun is one of the most interesting counties in Illinois. It is a high "peninsula" bordered on three sides by the Illinois and Mississippi Rivers. At the South end the county is crossed by the spectacular Cap au Gres fold where we shall see the normally horizontal layers of rock tilted to stand almost vertically. North of the fold Mississippian limestones form sheer cliffs but south of the fold karst topography is formed on St. Louis Limestone. We shall see the famous St. Peter sandstone of Ordovician age and visit a quarry in fossiliferous Silurian dolomite.

Assemble at Hardin High School.

May 16, 1959

WILMINGTON—WILL, KANKAKEE, AND GRUNDY COUNTIES

The Wilmington area contains several odd glacial features such as rubble bars, backwater silts, and dune sands, formed during the retreat of the Valparaiso ice sheet in the latter part of the Wisconsin (fourth) stage of glaciation.

We shall see bedrock of Ordovician, Silurian, and Pennsylvanian ages. In the upper portion of the Ordovician is the Neda Member, a formation bearing iron ore. Of the Silurian section we shall see the Edgewood, Kankakee, and Joliet Formations. We also shall have an opportunity to collect some of the famous Mazon Creek plant fossils.

Assemble at Wilmington High School.

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State of Illinois
William G. Stratton, Governor

Department of Registration and Education
Vera M. Binks, Director

Division of the
STATE GEOLOGICAL SURVEY
John C. Frye, Chief

SPECIAL FIELD TRIP

April 25, 1959

ILLINOIS STATE ACADEMY OF SCIENCE FIELD TRIP

Place to be announced later.

FIELD TRIPS

These annual Earth Science Field Trips are conducted to acquaint you with the development of the landscape around you and the geological processes that have formed the rocks and the present hills and valleys.

We need to study and understand the geological factors if we are to appreciate and fully utilize our mineral resources of coal, oil, limestone, sand and gravel, fluorspar, lead and zinc, and groundwater supplies.

GEOLOGICAL SURVEY SERVICES

The Illinois State Geological Survey has been exploring the mineral resources of the state for more than fifty years. The exploration and development of mineral resources is never finished, for new technology brings demand for new minerals, and new deposits or sources must be discovered as old ones are depleted.

The Survey keeps large files of fundamental geologic data and answers inquiries from industries, well drillers, landowners, schools, and the general public.

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ILLINOIS CLAY AND CLAY PRODUCTS

Clay and clay products production in Illinois became a 60 million dollar industry in 1957. The realm of clay products being made includes face and common brick, sewer and flue pipe, drain tile, bathroom fixtures, glazed tile, and electrical porcelains.

The clay deposits worked commercially in the State range from glacial till to relatively high-purity special clays. Supplies of surface clay and shale are virtually inexhaustible, and fireclay is abundant.

Clay production is well distributed over the State with more than 60 operations located in 32 counties. The northeastern part of the State leads in number of clay products producers.

In 1957 more than 480 million common and face bricks, having a value of 16 million dollars, were produced from Illinois clays. More than four million dollars worth of drain, sewer, and structural tile were made, in addition to over 25 million dollars worth of pottery and whiteware. Clay and silica refractories and other structural products were valued at more than 14 million dollars.

The clay products industries benefit from the Illinois State Geological Survey's research in clay mineralogy, which has an important bearing on the practical uses of various clay deposits in Illinois. The Survey is currently conducting an inventory of the shale and clay resources within the State.